REMARKS

The Applicants request reconsideration of the rejection. Claims 1-2, 4, 6-17, and 19-23 are now pending.

The Examiner objected to Claims 1-20 as containing numerous informalities. The Applicants have amended the claims to address the Examiner's concerns and to improve their overall form.

Claims 1-7 and 10-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Iwai, U.S. 6,683,703 (Iwai) and Kanematsu, U.S. 6,183,055 (Kanematsu). The Applicants traverse as follows.

According to amended Claim 1, the first data storage stores scanned data scanned in by the scanner. One line of the scan operation corresponds to one line of the scanned data in first data storage. However, the CCD 34 of Fig. 5 of Iwai does not correspond to the scanning and storage of scanned data as claimed.

In addition, amended Claim 1 requires a classificational executer which reads out the scanned data from the first data storage, wherein the printer performs printing by a plurality of print passes for one line of printed image, and the classificational executer classifies the scanned data in compliance with the print passes. On the other hand, the data stored in Iwai's shift registers 111-114 have no relationship

to the print passes because the printer of Iwai uses a laser exposure unit, and does not perform printing by a plurality of print passes for one line of a printed image. In this regard, Iwai also does not disclose the claimed second data storage in which the classified scanned data is stored in compliance with the print passes.

In addition, Claim 1 requires a print executer that reads out the classified scanned data from the second data storage by each of the print passes, generates print image data having a data format suitable for a print processing on the basis of the read-out scan data without classifying the scan data, and drives a print head of the printer on the basis of the print image data in each of the print passes. Thus, the claimed print executer does not need to classify the scan data in each of the print passes, so that high-speed printing can be realized.

On the other hand, Column 10, lines 23-36 of Kanematsu disclose that image data are developed into bit map data, which are ANDed with random masks for first-pass recording. Therefore, Kanematsu requires additional operation time to classify the bit map data, and thus does not disclose the print executer of Claim 1.

In accordance with the foregoing remarks, one sees that independent Claim 1 is patentably nonobvious over the

combination of Iwai and Kanematsu. In addition, the Applicants submit that dependent Claims 2, 4, 6-7, and 10-13, are also patentable, although the discussion of separate patentability is not necessary at this time to demonstrate their patentability in view of the dependence on Claim 1.

Independent Claim 14 is directed to a multi-function printer which includes a first data storage in which scanned data scanned by the scanner is stored, wherein one line of scanned operation of the scanner corresponds to one line of the scanned data in the first data storage; and a classificational storing section which reads out the scanned data from the first data storage and classifies the scanned data according to an appropriate data format for each time of movement of the print head in the main scan pass direction. Claim 14 further recites a print image data generator which sequentially reads out the classified scanned data stored in a second data storage, and generates print image data on the basis of the read-out scanned data for every reading out without classifying scan data, and a print executer which executes printing with the print head moved in the main scan pass direction on the basis of the print image data generated by the print image data generator. Thus, Claim 14 includes several of the features discussed above which are not found in

the combination of Iwai and Kanematsu. Accordingly, Claim 14 and dependent Claims 15-17 are also patentable.

Claims 19 and 20 have been amended to reflect similar changes in Claims 1 and 14, respectively. Therefore, Claims 19-20 are patentable at least on the basis of the arguments above with respect to Claims 1 and 14.

Claim 8 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Iwai and Kanematsu in view of Wakasugi, U.S. 6,157,937 (Wakasugi). Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Iwai and Kanematsu in view of Merna et al., U.S. 5,239,312 (Merna). Because neither Wakasugi nor Merna supplies the teachings missing from Iwai and Kanematsu as discussed above, Claims 9 and 10 are also patentable.

New Claim 21 is directed to a multi-function printer which includes a first data storage in which first data based on scan data scanned in by a scanner is stored, a classificational executer which reads out the first data and classifies the first data in compliance with a position of the first data so that the printer performs printing by a plurality of print passes for one line of printed image, a second data storage in which the classified first data is stored, and a print executer which reads out the classified first data from the second data storage by each print pass,

generates print image data used for a print pass to be processed on the basis of the classified first data in accordance with the print pass to be processed, and drives a print head of the printer on the basis of the print image data in each of the print passes. Therefore, Claim 21 and dependent Claims 22-23 also patentably define over the prior art of record.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,

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